REMARKS

This response is intended as a submission accompanying a Request for Continued Examination. The Applications request that the Response to Final Office Action dated January 4, 2007, filed March 1, 2007, **NOT BE ENTERED** without prejudice in favor of this response. In view of the following amendment and discussion, the Applicants believe that all claims are in allowable form.

CLAIM REJECTIONS

A. 35 U.S.C. §102 Claims 1, 3-9, 11-20, 22 and 28-31

Claims 1, 3-9, 11-20, 22 and 28-31 stand rejected under 35 U.S.C. §102(b) as being anticipated or under 35 U.S.C. §103(a) as being anticipated by or unpatentable over Japan Patent No. 2001160576 to *Otsubo, et al.* (hereinafter referred to as "*Otsubo*"). In response, the Applicants have amended claims 1, 5, and 16 to more clearly recite certain aspects of the invention.

Independent claim 1, 5 and 16 recite elements not taught or suggested by *Otsubo. Otsubo* teaches using a detector disposed in a center portion of a substrate support assembly. The detector measures a thickness variation of a film disposed on the substrate during an etching or a CMP process. However, *Otsubo* does not teach or suggest interfacing with a surface of periphery region of a substrate. *Otsubo* does not teach or suggest detecting one or more test patterns disposed on periphery region of a photomask substrate. Furthermore, *Otsubo* teaches emit a light to a mirror 19 and the light emitted to the mirror 19 is further reflected therefrom to the backside of the substrate with a plurality of angles. With the selected angles of the light reflected from the mirror 19, the light can be roughly focused on substrate backside. However, *Otsubo* does not teach or suggest an interferometer endpoint detection system configured to emit a direct light to detect one or more test patterns disposed on periphery region of the photomask substrate, as recited by claim 16.

Therefore, *Otsubo* does not teach or suggest an endpoint detection system configured to interface with a side of the photomask substrate disposed on periphery region of the substrate supporting region, as recited by claim 1; an interferometer endpoint detection system positioned to interact with a surface of periphery region of the

photomask substrate facing the substrate support member, as recited by claim 5; or an interferometer endpoint detection system disposed through the substrate support member and configured to emit a direct light to detect one or more test patterns disposed on periphery region of the photomask substrate through a bottom surface of the photomask substrate, as recited by claim 16.

The Examiner asserts that the limitation of test pattern and size of the substrate are of no significance in determining patentability of the apparatus claim. *Ex Parte Thibault, 164 USPQ 666, 667(Bd. App. 1969)*. Further, the region to be detected of claims 7, 18 and 29-31 is an intended use limitation. However, the Appellants submit that the Examiner has overly simplified *Thibault* and that *Thibault* is not applicable to the Appellants' claimed test pattern and size of the substrate. In *Thibault*, the court held that the purpose to which an apparatus to be put and the numerous expressions relating to the apparatus to contents thereof during an intended operation are of no significance in determining patentability of apparatus claim.

Here, end point detection for reticle fabrication requires a detection system located at a specific location due to the size of the substrate and location of the test pattern location. The system taught by *Otsubo* does not address or contemplate this problem, and as such, is not suitable for such use without modification as claimed by the Applicants. Since the center, or written portion, of substrate may have different patterns substrate to substrate, an endpoint detection system located in the center region of the substrate will often not align with the features being etched for many designs, such making detection of the process endpoint impossible for many designs. The claimed apparatus addresses this issue in at least two ways. First, the endpoint apparatus is located substrate support such that it aligns with the perimeter region of the substrate, *e.g.*, outside the center written region. The location of the endpoint apparatus in the substrate support is chosen such that the endpoint detector is aligned with a test pattern provided outside the written region of the substrate. Since the test pattern is not part of the design patterned in the written region of the reticle, the test pattern may be present for all designs in a predefined position on the perimeter region of the substrate. Thus, the endpoint of processes performed in the center region is determined by monitoring a test pattern disposed on the perimeter of the substrate. This

endpoint detection solution for reticle etching can only be accomplished by positioning the endpoint detector as claimed. Since the *Otsubo* device is not located this region of the substrate support as claimed by the Applicants, *Otsubo* is not suitable endpoint detection of these types of substrates without modification as claimed by the Applicants. Thus, the test pattern and size on the substrate are not the numerous expressions during an intended operation or intended use limitation as asserted by the Examiner as they provide a relative structural location of the endpoint detector, and as such, have "constructive significance" which enables the invention and makes the endpoint detection system function and operate differently from *Otsubo*. *Gardner v. Tec Systems, Inc. 725, F.2d 1338, 1346* (Fed. Cir. 1984).

Moreover, "anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim." *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984)(citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983). Here, *Otsubo* fails to teach or suggest an interferometer endpoint detection system positioned to interact with a surface of periphery region of a substrate. Furthermore, *Otsubo* fails to teach or suggest a modification to itself that would yield Applicant's apparatus. As *Otsubo* fails to teach or suggest each and every elements of the claimed invention, the Applicants submit that the present invention is patentable over *Otsubo*.

Thus, Applicants submit that independent claims 1, 5 and 16, and all claims depending therefrom, are patentable over *Otsubo*. Accordingly, the Applicant respectfully requests the rejection be withdrawn.

CONCLUSION

Applicants submit that all claims are in condition for allowance. Accordingly, the Applicants respectfully request reconsideration of this application and its early allowance.

If the Examiner believes that any unresolved issues still exist, it is requested that the Examiner telephone Mr. Keith Taboada at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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